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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/626,075

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Takao Yamaguchi

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EXAMINER

KOSTAK, VICTOR R

ART UNIT

PAPER NUMBER

2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/626,075	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Victor R. Kostak	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23, 59-62 and 95-105 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23, 59-62 and 95-105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The disclosure is objected to because of the following informalities: upon review of the specification, applicant is directed to remove specific referencing to claims 1-79 so matched with respective claimed subject matter (spanning pages 7-19 of the specification), since only claims 23, 59-62 and 95-105 are now included (although eventual renumbering would be applied), and because the corresponding subject matter has been redrafted.

Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23, 59-62 and 95-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klemets et al. (5,918,022, of record) in view of Suzuki et al. (5,602,956).

Reviewing Klemets (Fig. 1), he communicates digital compressed audio/video/text data streams (e.g. col. 2 lines 44-48) wherein he includes priority data added to the encoded data stream (e.g. col. 12 lines 8-20) to thin the data (i.e. to lower the bandwidth by dropping bits) when the actual transfer rate exceeds the expected (target) rate (e.g. col. 8 line 35+), the buffering timing and readout being delayed upon the comparison of timing (Figs. 5C, 5D 7A). A priority threshold is determined (Figs. 5A, 5B, 6B) to achieve a desired transmission rate, wherein the data stream is transmitted at the desired rate when the data quality and bandwidth satisfy the threshold; and when the bandwidth and/or loss rate exceeds the threshold, the threshold is adjusted (e.g. Figs. 8-11; col. 6 lines 3-18; col. 7 line 8+).

The examiner points out that as Klemets expressly equates his transmission rate to bandwidth (col. 6 lines 38-41), that bandwidth (which characteristically contains actual encoded data) is adjusted to either include more data bits or less data bits (col. 6 line 45+). Those data bits correspond to portions of the encoded data stream. Those bits are indeed data portions. Some of the portions are transmitted and some are not. The bits dropped correspond to the data portions that are not transmitted.

Furthermore, Klemets goes on to explain that his prioritization can be based on a *scalable layered* protocol based on parameters including resolution and frame rate (col. 12 lines 15-16). This is additional compensation or data content compromise that is dictated by the threshold-determined adequacy or inadequacy of the data, and one of ordinary skill in the art can very reasonably consider or designate his transmission rate/bandwidth amount as a priority threshold since the decision on data quantity directly involves giving priority to data to be transmitted and other data to not be transmitted (thereby lowering the bit rate).

Moreover, Klemets does not rely on a selection between two transmission rates (or bandwidth amounts) so dictated by the target rate but continuously adjusts the determined thresholds associated with the desired rates/bandwidths as he dynamically makes the selections of plural bit rates. He expressly gives two examples but points out that they are selected from a continuous range (col. 6 lines 49-54). The *continuous* range is adjusted on a *dynamic* basis, meaning that the transmission rate/bandwidth is determined according to an *adjustable* thresholding technique to continuously modify the degree of thinning (when necessary), ultimately to assure a realistic quality in reception/playback.

Addressing applicant's amended claim language, first, Klemets discloses classification of plural priority types that involve the stream itself in terms of frame types (i.e. I, P or B), and content priorities, which can include resolution or frame rate, and which Klemets points out are only examples (col. 12 lines 8-21). As discussed at length, the priority data he processes is adjusted when a determination has been made as being necessary to do so, by adjusting the thresholds thereof.

Suzuki discloses the general inclusion of stream priority data included in the MPEG header further including packet type (audio or video) with the priority level (noting Fig. 31, for example).

In view of this header structure typical of MPEG, and in view of the additional priority designations disclosed by Klemets who also uses the well known MPEG format, it would therefore have been obvious make continuous adjustments on *all* of the data priorities (which controls payload data) since one of ordinary skill in the art typically takes into consideration the negative effects of the communication medium to which the data stream is subjected, as well as considering characteristic data bandwidth constraints (evident in the extensive discussion of the dynamic thresholding by Klemets).

Claims 23 and 95 therefore accordingly remain rejected.

As for claims 59 and 60, the data packet stream (claimed time-series data) includes priority information (parent/child frame designations: col. 12 lines 8-14) and other priority assignments (col. 12 lines 15-20), including threshold data priority. The threshold priority is determined (discussed above) and the data content and priority data are transmitted and received in the communication operation. If there is a data loss, retransmission is requested (Fig. 12; col.

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11 line 26+), and is data loss rate exceeds the threshold, the threshold can be adjusted (also discussed above). The data is accordingly retransmitted when the threshold priority is satisfied (or another retransmission would be required). It would also have been obvious to one of ordinary skill in the art to consider the stream priority data typical in MPEG packet streams as expressly exhibited by Suzuki, for the reasons given above regarding claims 23 and 95 is also applied to these two claims.

As for claims 61 and 62, when the digital serial data stream suffers a loss at a particular rate of occurrence, the threshold priority is accordingly adjusted (also discussed previously).

The examiner's explanation given above regarding claims 23, 95, 59 and 60 is also applied to these two claims.

Regarding identical claims 96-98, priority is increased to the more relevant data content for both transmission and retransmission when data loss is a factor (noting again col. 12 lines 8-30).

As for claim 99, the encoded information is for MPEG data comprising I, B and P frames (e.g. col. 12 lines 42-47), and the priority threshold is raised or lowered according to the priority information added to the encoded information.

New claims 100-105 are virtually identical to one another (being different on their dependencies and categories of invention), so they are addressed together. The raising any one or plural priorities (the priorities of Klemets being adjustable, noting the dynamic thresholding as explained previously) would have been obvious and in fact expected since the purpose is to provide as much complete and accurate data as possible for communication, particularly when error in any form (applicant's specific retransmission frequency and loss rates, for example)

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exceed a threshold, which thereby strengthens the value of data so prioritized to be usable in transmission.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is (571) 272-7348. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Or faxed to:

(571) 273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 308-HELP.

/Victor R. Kostak/
Primary Examiner
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